DOP014 Dietary patterns and risk of Inflammatory Bowel Disease in Europe: Results from the EPIC study

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Conclusions: In this large population-based study the incidence of both CD and UC dramatically increased in teenagers over a 21-year period with no modification of age, location at diagnosis and time between onset of symptoms and diagnosis. These results suggest that a strong environmental factor predisposing to IBD is at work in this population.

References:

DOP015 Inflammatory bowel diseases in Israel: High prevalence suggested by health maintenance organizations administrative databases

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Background: Diet is suspected to be an environmental factor involved in the etiology of inflammatory bowel disease (IBD). Epidemiological studies have examined associations between intake of specific nutrients or foods and risk of ulcerative colitis (UC) and Crohn’s disease (CD)(1). However in several diseases, to assess the impact of overall diet and correlations between groups of foods and risk of disease, a dietary pattern approach have been used (2). For the first time, we prospectively investigated the global impact of diet to identify dietary patterns associated with UC and CD risks.

Methods: In this case-control study nested within the European Prospective Investigation Into Cancer and Nutrition (EPIC), we included all individuals who developed incident UC or CD during follow-up and two matched controls. At recruitment, dietary intake from country-specific food frequency questionnaires and lifestyle factors were recorded (3-4). Conditional logistic regression models with adjustment for potential confounders were used to estimate incident rate ratios (IRRs) of developing UC and CD associated with the Mediterranean diet score and a posteriori dietary patterns produced by factor analysis.

Results: A total of 256 individuals were diagnosed with UC and 117 with CD. A “high sugar and soft drinks” pattern was associated with a higher risk of UC, particularly in cases diagnosed at least two years after dietary assessment (IRR for the fifth vs. first quintile 1.68 (0.98-2.87); p trend = 0.03). Individuals with high sugar and soft drinks intakes were at high risk of UC only when they had low intakes of vegetables, legumes and fruit. No dietary pattern was associated with CD. The Mediterranean diet score was not associated with UC or CD.

Conclusions: In this large European prospective study a dietary pattern characterized by high sugar and soft drinks, and low vegetable, fruit, and legume consumptions was associated with UC risk. These findings must be confirmed in other populations, and experimental data are needed to explore the effect of such a dietary pattern on the composition and activity of the gut microbiota and other pathways involved in the pathogenesis of IBD. If confirmed, the increasing shift towards a diet rich in sugar and soft drinks could have contributed to the increased incidence of UC in the US and Europe over the past 50 years and more recently in Asia.